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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kensuke Itakura

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EXAMINER

STANLEY, JANE L

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/559,999	Applicant(s) ITAKURA ET AL.	
	Examiner JANE L. STANLEY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-7, 9-10, 12-15, 17 and 19 is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 16 and 18 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's reply received on 25 September 2008 has been fully considered.

Claims 1-3, 5-7 and 9-19 are pending: **claims 2 and 3** are original, **claims 1, 5-7 and 9** have been amended, **claims 4 and 8** are cancelled, and **claims 10-19** are new.

Claim Objections

Claim 5 is objected to because of the following informalities: the claim recites "The process" and should be amended to --A process--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 11, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572, using US 6,657,071 as English language equivalent for citations) in view of Ishikawa et al. (EP 0 384 480 A2).

Regarding claims 1, 11, 16 and 18, Tano et al. teaches a process for producing α -sulfo-fatty acid alkyl ester salt powder particles (col 4 ln 22-34; col 12 ln 33-35) comprising a sulfonation step bringing a fatty acid alkyl ester into contact with a sulfonating gas, an esterification step for esterifying the product of the sulfonation step with a lower alcohol, neutralizing the esterified product of the esterification step to obtain a neutralized product, and a bleaching step for bleaching the neutralized product (col 4

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In 22-31) to form a slurry (see Figure 1) wherein the final active ingredient concentration, α -sulfo fatty acid alkylester salt and α -sulfo fatty acid alkylester disodium salt combined, is 70.1 wt% (col 18 ln 10-14). Tano et al. teaches the step of aging/heat treating the products of the various reaction steps at different points in the synthesis of the α -sulfo fatty acid alkylester salt, i.e. after sulfonation (col 8 ln 20-23) and between the steps of neutralizing and bleaching (col 11 ln 31-39), and that the step can be optional (Figs 1 and 10; col 8 ln 26). Tano et al. further teaches the aging step is performed from 70 to 100 °C for 1 to 120 minutes (col 8 ln 20-23) (this makes obvious the instant 60-90 °C, and the instant 1-48 hours; also makes obvious instant 2-12 hours). Tano et al. also teaches storing the product in a constant temperature room for 1 month (col 18 ln 41-43) at 40 °C (col 21 ln 43-46) (makes obvious instant second aging step, instant 24-45 °C, and instant longer than 30 minutes; also makes obvious instant 30-45 °C and instant 30-40 °C).

While Tano et al. does not directly teach that the product is in a pasty form, since Tano et al. renders the process obvious the product being in pasty form is implicit. Furthermore, Tano et al. teach that the viscosity of the product is dependent on the concentration of lower molecular weight alcohol used in the esterification step and that one of ordinary skill in the art would easily be able to manipulate the property of viscosity i.e. consistency in the resulting product.

Tano et al. also does not directly teach making the product into the flakes or pellets containing equal to or less than 10 wt% of water. However, Ishikawa et al. teaches a process of forming low moisture (i.e. 4.9 wt% moisture, example 1 Table 1 ln

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49; See all examples, Table 1) containing flakes of α -sulfo fatty acid alkylester salt from paste material that can be used to form a high-density detergent (pg 4 ln 2-12).

Ishikawa et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely the process of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to use the process of Ishikawa et al. in the process of Tano et al. and would have been motivated to do so to form low moisture content flakes of α -sulfo fatty acid alkylester salt suitable for high-density granular detergents (Ishikawa et al. pg 2 ln 46-47).

Regarding claim 3, Tano et al. further teaches the process wherein the fatty acid alkyl ester used has an iodine value of 0.5 or less (col 5 ln 63-64) (this obviates the instant claimed iodine value of 1 or less).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572, using US 6,657,071 as English language equivalent for citations) in view of Ishikawa et al. (EP 0 384 480 A2) as applied to **claim 1** above, and further in view of Magari et al. (US 4,416,809).

Tano et al. in view of Ishikawa et al. renders the process of **claim 1** obvious as set forth above.

Tano et al. does not teach the process further comprising a step of mixing the powder, flakes, or pellets with an inorganic powder having an average particle diameter

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of 0.1-100 μm , in an amount of 1-40 wt%. However, Magari et al. teaches a process of making granular or powdered detergent compositions by mixing the α -sulfo fatty acid alkylester salt, in powder, particle or granule form (col 3 ln 50-55) with zeolites (col 4 ln 3) (inorganic powder) wherein the zeolite is present at 15% of the composition and has an average particle size of 1.3 μm (Example 4; Table 1, A-type zeolite) (this obviates the instant claimed inorganic powder amounts and average particle diameter as outlined above). Magari et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely the process of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to use the process of Magari et al. in the process of Tano et al. and would have been motivated to do so to form a granular detergent wherein the α -sulfo fatty acid alkylester salt component is resistant to hydrolysis during processing, i.e. spray drying, by utilizing a neutral builder, i.e. zeolite (Magani et al. col 4 ln 10-15).

Allowable Subject Matter

Claims 5-7, 9-10, 12-15, 17 and 19 are allowed: Independent **claims 5, 6, 9 and 10** are found allowable over the prior art, and dependent **claims 7, 12-15, 17 and 19** are found allowable as they depend from allowable claims.

The following is a statement of reasons for the indication of allowable subject matter: The closest prior art of record Tano et al. (US 6,657,071) teaches a method of making α -sulfo-fatty acid alkyl ester salt in high concentration comprising a sulfonating

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step, an esterifying step, a neutralization step, a bleaching step and an aging step (col 4 ln 22-34; col 12 ln 33-35; col 4 ln 22-31; Figure 1; col 18 ln 10-14; col 8 ln 20-23; col 11 ln 31-39; and col 8 ln 26). Tano et al. in view of Tadsen et al. makes obvious a water content of less than about 10 wt% in order for the alpha-sulfonated fatty acid ester salt to remain in particulate, free-flowing form (Tadsen et al. col 9 ln 10-15) and to avoid excessive caking, dough formation and agglomeration as well as to prevent acid-catalyzed hydrolysis of the alpha-sulfonated fatty acid ester salt (Tadsen et al. col 9 ln 19-26). Tano et al. further teaches storing the product in a constant temperature room for 1 month (col 18 ln 41-43) at 40 °C (col 21 ln 43-46) as a test for product stability. However, the prior art of Tano et al. neither teaches nor suggests steps wherein the product stored in the constant temperature room, i.e. the product aged for a second time, is then mixed or granulated with a detergent via the steps of instant independent **claims 5, 6, 9 or 10.**

Response to Arguments

Claims 1-3, 5-7 and 9-19 are pending: **claims 2 and 3** are original, **claims 1, 5-7 and 9** have been amended, **claims 4 and 8** are cancelled, and **claims 10-19** are new.

The objection to the abstract of the Specification for being of undue length is withdrawn in view of Applicant's amended abstract.

The 35 U.S.C. 112, second paragraph, rejection of **claims 5-6 and 9** for insufficient antecedent basis is withdrawn in view of Applicants amendments to the

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claims. It is noted that the basis for the previous 112 rejection of **claim 5** remains as Applicant's did not amend the preamble, however as the claim is now in independent form the 112 rejection is not being maintained, but please note the above claim objection.

The 35 U.S.C. 102(b) rejection(s) of claims 4 and 8 as being anticipated by Ishikawa et al. (EP 384480 A2), Magari et al. (US 4,416,809), and Fukutome et al. (JP 2979727) respectively, are withdrawn as a result of Applicant's cancellation of the claims.

The 35 U.S.C. 103(a) rejection of **claims 5-7 and 9** as unpatentable over Tano et al (WO 01/00572) in view of Ishikawa et al. (EP 384480 A2), and further in view of Fukutome et al. (JP 2979727) are withdrawn in view of Applicants amendments.

Applicant's arguments, regarding the 35 U.S.C. 103(a) rejections of **claims 1 and 3** as unpatentable over Tano et al. (WO 01/00572) in view of Ishikawa et al. (EP 384480 A2) and regarding the 35 U.S.C. 103(a) rejection of **claim 2** as unpatentable over Tano et al. (WO 01/00572) in view of Ishikawa et al. (EP 384480 A2) and further in view of Magari et al. (US 4,416,809) have been fully considered but they are not persuasive.

Applicant's argue that Tano fails to disclose or suggest the paste-aging step however it is noted that Tano teaches the step of aging/heat treating the products of the various reaction steps at different points in the synthesis of the α -sulfo fatty acid alkylester salt, i.e. after sulfonation (col 8 ln 20-23) and between the steps of neutralizing and bleaching (col 11 ln 31-39), and that the step can be optional (Figs 1

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and 10; col 8 ln 26) and furthermore that such a step is useful for improving the color of the final product (col 14 ln 13-14). Since it is recognized that the color of the final product is a variable to be controlled, one of ordinary skill in the art would have appreciated that color could be optimized. The addition/inclusion of an aging/heat-treating step to the paste obtained from the bleaching step would have been obvious to one of ordinary skill in the art in order to improve the color and odor characteristics of the final product (col 11 ln 62-64). Furthermore, Applicant's argue that Tano fails to disclose or suggest a second aging step, however it is noted that Tano teaches storing the product in a constant temperature room for 1 month (col 18 ln 41-43) at 40 °C (col 21 ln 43-46) which meets the limitations of instant **claim 1**.

Regarding Applicant's arguments that Ishikawa et al. fails to correct the deficiency of Tano et al. It is noted that Ishikawa et al. is cited to teach that one of ordinary skill in the art would find it obvious to form the powder, flakes or pellets with a water content of less than 10 wt% and would have been motivated to do so to form low moisture content flakes of α -sulfo fatty acid alkylester salt suitable for high-density granular detergents (Ishikawa et al. pg 2 ln 46-47). Ishikawa et al. was/is not cited in order to teach the instant second aging step. Ishikawa et al. was/is cited to teach that one of ordinary skill in the art would find it obvious that a water content of less than 10 wt% is desirable for α -sulfo-fatty acid alkyl ester salt particles.

Regarding Applicant's arguments that Magari et al. fails to correct the deficiency of Tano et al. It is noted that Magari et al. is cited to teach that one of ordinary skill in the art would find it obvious to mix the powder, flakes or pellets with an inorganic

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powder having an average particle diameter of 0.1-100 μm , in an amount of 1-40 wt% and would have been motivated to do so to form a granular detergent wherein the α -sulfo fatty acid alkylester salt component is resistant to hydrolysis during processing, i.e. spray drying, by utilizing a neutral builder, i.e. zeolite (Magani et al. col 4 ln 10-15). Magari et al. was/is not cited in order to teach the instant second aging step. Magari et al. was/is cited to teach that one of ordinary skill in the art would find it obvious to mix the α -sulfo fatty acid alkylester salt with an inorganic powder such as a zeolite.

Regarding Applicant's assertion of unexpected results, Tano et al. teaches storing the product in a constant temperature room for 1 month (col 18 ln 41-43) at 40 °C (col 21 ln 43-46), which meets the second aging step limitations of instant **claim 1**, and furthermore Tano et al in view of Ishikawa et al. teaches the instant invention as Ishikawa et al. makes obvious a water content of less than 10 wt%. Tano et al. in view of Ishikawa et al. make obvious the instant invention and the properties of the resulting α -sulfo-fatty acid alkyl ester salt, i.e. improved anti-caking under pressure and improved flowability, are implicit and would flow naturally from the combination of prior art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANE L. STANLEY whose telephone number is (571)270-3870. The examiner can normally be reached on Monday-Thursday, 7:30 am - 5 pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/JLS/

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